ecology and environment, inc.
111 WEST JACKSON BLVD , CHICAGO, ILLINOIS 60604, TEL 312-663-9415
International Specialists in the Environment

January 14, 1994

Ms. Gail Nabasny
Deputy Project Officer
Emergency Support Section, HSE-5J
U.S. Environmental Protection Agency
77 West Jackson Blvd.
Chicago, IL 60604

Re: Chem-Met Site
Wyandotte, Wayne County, Michigan
TDD #: T05-9302-002
PAN #: EMI0575SAA

Dear Gail Nabasny;

On February 4, 1993, the Ecology and Environment, Inc. (E & E) Technical Assistance Team (TAT) was tasked by the United States Environmental Protection Agency (U.S. EPA) under Technical Direction Document (TDD) # T05-9302-002 to assist the U.S. EPA Radiation Division in collecting well samples for radioactivity analysis at the Chem-Met site at 18550 Allen Road, in Wyandotte, Michigan (see Figure 1). Chem-Met Services is presently an active disposal facility.

In May of 1991, the Michigan Department of Natural Resources (MDNR) and representatives from the University of Michigan collected well samples from the Chem-Met site, but were unable to determine the exact isotopes. The U.S. EPA was requested by MDNR to determine the exact isotopes that generated high levels of gross beta readings.

On February 23, 1993, Jim Mitchell and Robert Hayes of the U.S. EPA Air and Radiation Division (ARD), TAT member (TATM) Ronald Bugg, and MDNR representatives David Slayton and Clay Spencer met with William Hartman and Robert Colburn of Chem-Met Services to discuss the reason for the well sampling and the sampling protocol for the six sump wells and one of the run-off collection tanks.

After the meeting, the sampling group included (ARD) Mitchell and Hayes, TATM Bugg, and Chem-Met Representative Colburn. The amount of sample collected depended on the level of each well. The volume of sample ranged from one to three 32-ounce containers. All of the samples were collected with disposable bailers.

At 1544 hours, TATM Bugg and ARD Mitchell collected sample K-1 from sump well-1 (see Figure 2). The well was between 20 to 25 feet deep and a water level of 10 feet.

At 1601 hours, the second sump well sample (K-2) was collected 60 feet west of well-1. Well-2 was over 30 feet deep and had a water level of 10 feet deep.

At 1615 hours, sample K-5 was collected by TATM Bugg from the sump well near the office trailers (see Figure 2). Sump well 5 was over 100 feet deep.

At 1626 hours, sample K-4 was collected by TATM Bugg from a shallow well that was partially frozen. The well was approximately 10 feet deep with a water level of less than a foot.

At 1649 hours, sample K-7 was collected from a run-off collection tank. The top of the tank was at ground level. There were seven run-off collection tanks on-site. The sample was collected from the tank approximately 20 feet east of Sump well-4.

At 1656 hours, sump well sample K-3 was collected, approximately 10 feet west of sump well-4. The well was approximately 20 feet deep and the partially frozen water level was 3 to 4 feet deep.

At 1710 hours, sample K-6 was collected from a sump well located 150 feet west of sump well-4. The partially frozen water level was near the top of the well-6. A duplicate sample was collected from the well and was labeled K-8.

The samples were screened on site with a radiation meter. The readings were background at 6 to 10 micro-Roentgen per hour. The samples were packaged for shipment and screened for a second time indoors. The readings were background. The samples were shipped overnight to the National Air and Radiation Environmental Laboratory (NAREL) in Montgomery, Alabama and analyzed for gamma isotopes and gross beta radiation (see Table 1 for results). NAREL analysis indicated the levels of gamma and gross beta radioactivity were generated by potassium (K-40).

Should you have any questions about Chem-Met site, feel free to contact the Chicago TAT office.

Sincerely,

Ronald W. Bugg, TAT Member

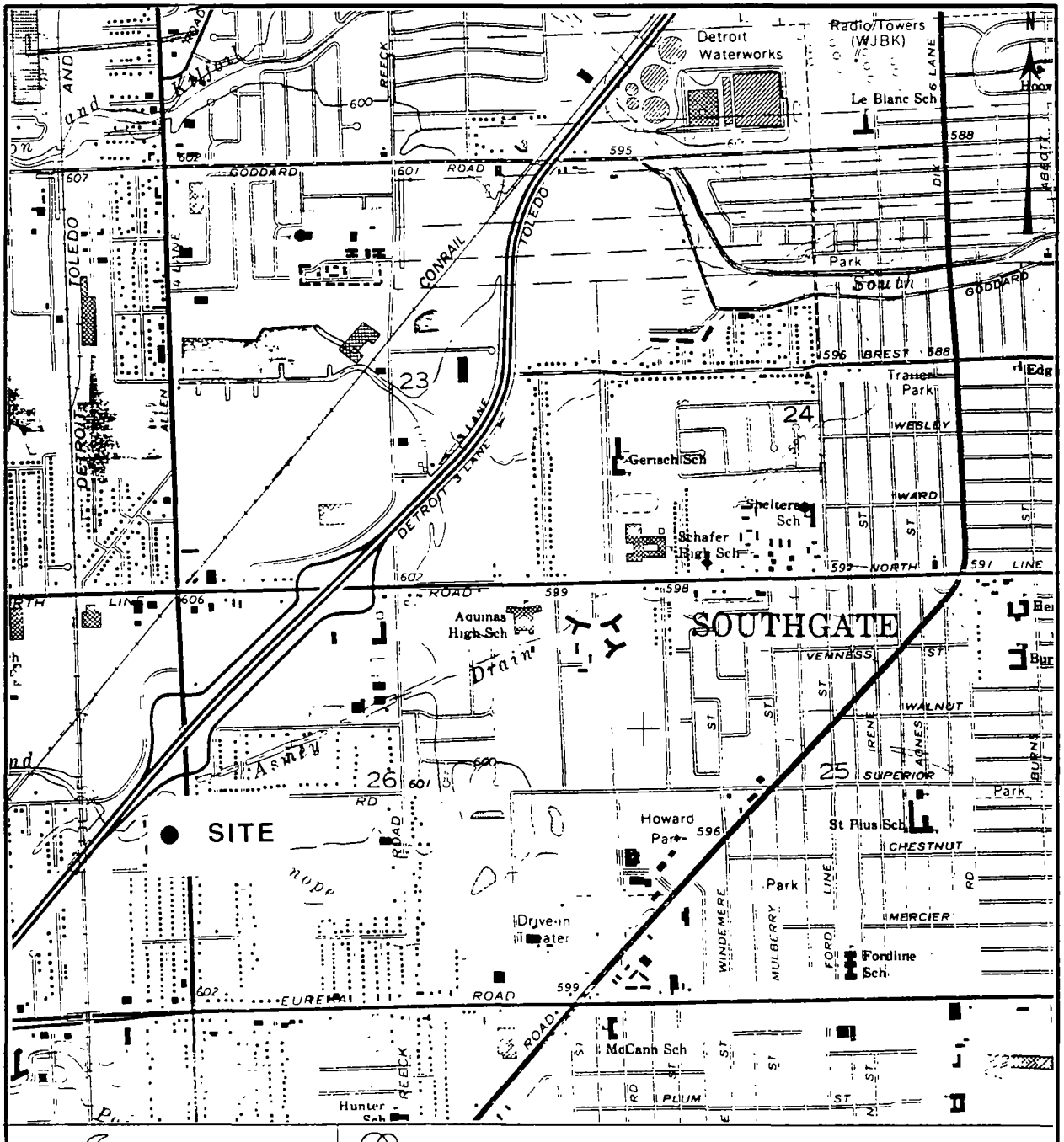
for Thomas Kouris, TAT Leader

cc: James Mitchell, U.S. EPA Region V, Radiation Group
Jack Barnette, Radiation Program Manager

Radiochemical Results
for
Chem-Met Site
UCL for K-40 in picoCuries (pCi)
February 23, 1993

SAMPLE I.D.	GAMMA (Avg. per Sample)	GROSS BETA (Avg per Sample)
K-1	232.2	179.3
K-2	381.7	442.7
K-3	2949	3595
K-4	381.4	527.4
K-5	566.7	668.6
K-6	1889.5	2168
K-8 (Duplicate of K-6)	1888.7	2162
K-7	1671.5	2077

UCL = The Upper Confidence Level



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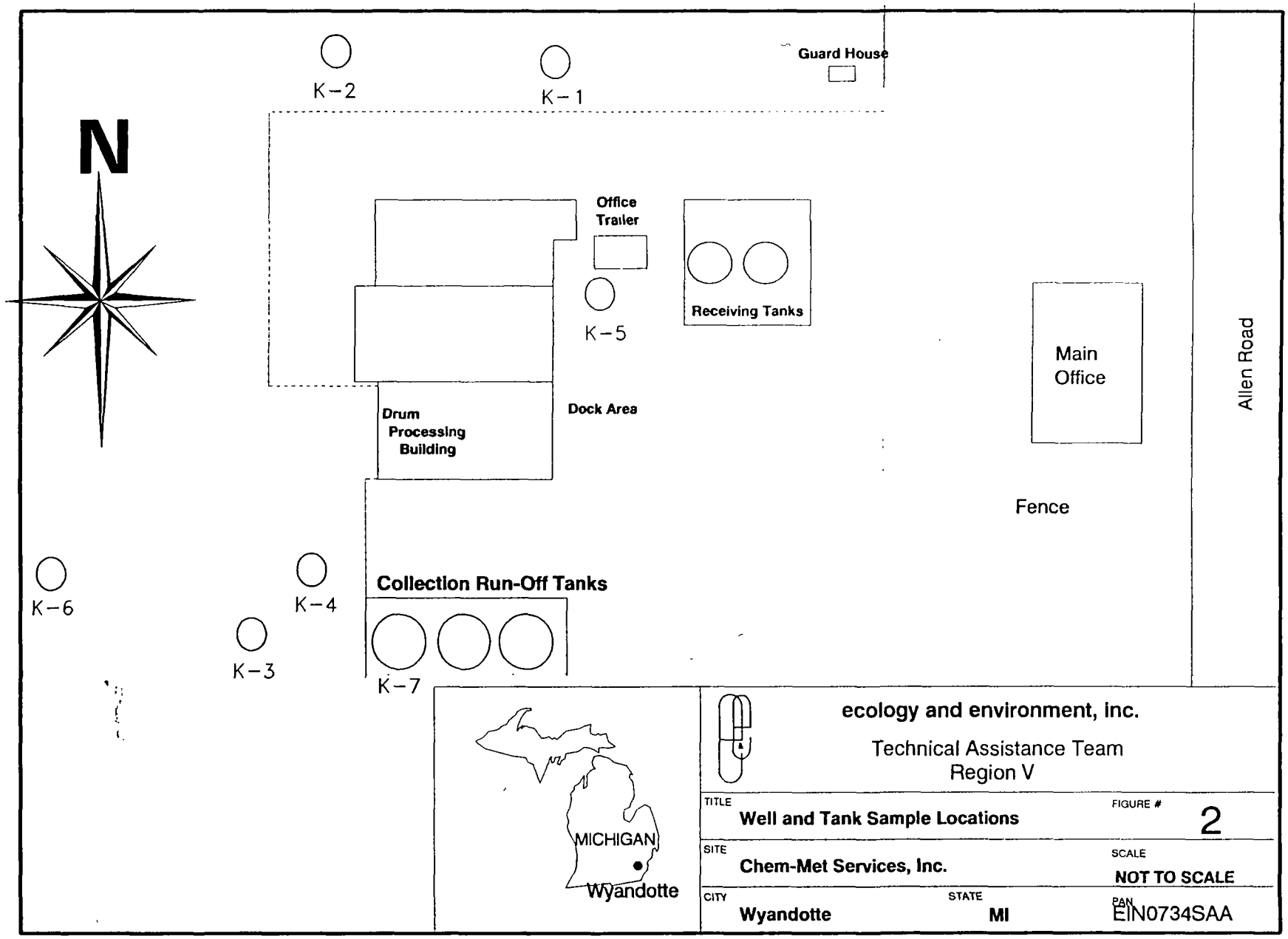
Technical Assistance Team
Region V

TITLE: Site Location Map	FIGURE #: 1
SITE: Chem-Met Services, Inc. 18550 Allen Road	SCALE: 1:24,000
CITY: Wyandotte STATE: MI	PAN: EMI0575SAA


N
K-2
K-1
Guard House
Office Trailer
K-5
Receiving Tanks
Main Office
Allen Road
Drum Processing Building
Dock Area
Fence
K-6
K-4
Collection Run-Off Tanks
K-3
K-7
MICHIGAN
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ecology and environment, inc.
Technical Assistance Team
Region V
TITLE
Well and Tank Sample Locations
FIGURE #
2
SITE
Chem-Met Services, Inc.
SCALE
NOT TO SCALE
CITY
Wyandotte
STATE
MI
PAN
EIN0734SAA